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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,637	04/11/2001	Alfons Gail	10537/96	1822

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EXAMINER

BANNAPRADIST, LISA M

ART UNIT PAPER NUMBER

3676

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/832,637

Applicant(s)

GAIL ET AL.

Examiner

Lisa Bannapradist

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claims 6 and 9 is withdrawn in view of the newly discovered reference(s) to U.S. 6,106,190 to Nakamura et al. and U.S. 3,042,159 to Anderson. Rejections based on the newly cited references follow.

### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 1, 3-5, 10-11 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,302,400 to Werner et al in view of U.S. 5,066,025 to Hanrahan.

In regard to claims 1, 3-5, 10-11: Werner discloses a brush seal comprising a bristle housing (2) including a cover plate (3) and a supporting plate (4), bristles (5), circumferential surface (9), two side surfaces (vertical portions of 3 and 4), a first positioning arrangement (7) and a second positioning arrangement (at 9 in 2). The cover plate includes a flanged section (7) with an undercut (at 6) and inner surface (at 8) and the supporting plate includes an axial section (horizontal portion of 4). The cover plate and supporting plate are formed by non-cutting shaping and deep drawing (col.1, line 66).

Werner fails to disclose a positive-locking arrangement between the first positioning element and the second positioning element. However, Hanrahan teaches a brush seal as prior

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art (Fig. 2) having a positively locking (at 30 and 32) first positioning element (20) with a second positioning element (12) for the purpose of preventing incorrect installation of the assembly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a positively locking feature to Wilson's invention to prevent misassembly.

In regard to claim 14: Werner also fails to disclose angled bristles. Hanrahan states that it is known in the art that bristles usually are located at an angle with respect to the radius for the purpose of maintaining proper sliding relationship with the rotor (col. 1, lines 21-28). Where the range of article sizes disclosed in the prior art envelopes the recited range, and there is no showing of criticality of the recited range, such recited range would have been one of ordinary skill in the art. In re Reven, 390 F.2d 997, 156 USPQ 679 (CCPA 1968).

4. **Claims 2, 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner and Hanrahan as applied to claim 1 above in view of U.S. 6,106,190 to Nakamura et al and in further view of U.S. 3,042,159 to Anderson.

Werner and Hanrahan disclose applicant's invention except the projection and recess. In one embodiment, Nakamura teaches a projection (66b in Fig. 5b) on a first positioning element (66B) which fits into a recess (62b) of the second positioning element (60) to prevent the two elements from rotating with respect to one another. Nakamura also teaches a first positioning arrangement (38) and a second positioning arrangement (76) where the first positioning arrangement has a projection (W) that projects beyond one side surface for the purpose of preventing the first positioning arrangement from rotating with respect to the second positioning arrangement (col. 3, line 39). The latter projection is lenticular, formed as a spot-weld during a

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non-cutting shaping process. It would have been obvious to one having ordinary skill in the art at the time of the invention to include a welded projection similar to the one of Nakamura with Werner's invention in order to prevent the first positioning element from rotating with respect to the second positioning element.

Nakamura teaches a recess and a projection to prevent rotation and teaches a spot-weld to prevent rotation but does not specifically teach a spot-weld projection to be housed within a recess to perform the same function cited above. Anderson further teaches that during the spot-weld process, a recess will naturally be formed on a second positioning element (2). This recess engages the spot-weld. Thus, it would have been obvious to one of ordinary skill in the art to form a spot-weld engaged in a recess, given the nature of the known spot-weld process.

5. **Claims 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Werner in view of Hanrahan and further in view of U.S. 5,066,024 to Reisinger et al.

Werner and Hanrahan disclose the invention except the fastening methods as claimed. Reisinger teaches a pair of holes (7 and corresponding holes in housing) configured to receive a fastener for the purpose of providing a simple and detachable connection while still maintaining the operability of the seal (col. 1, line 60). It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate holes and fasteners to Werner's invention for the purpose of providing a simple and detachable connection to other components.

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***Response to Amendment***

6. The amendment filed on July 8, 2002 under 37 CFR 1.131 is sufficient to overcome the references as applied in the prior Office action. However, since the amendment necessitated new rejections, applicant's arguments do not apply to the new grounds of rejections cited in this Office action.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

8. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent 2,527,479 to Hall, U.S. Patent 2,635,167 to Nelson, U.S. Patent 5,056,799 to Takenaka et al., U.S. Patent 5,794,938 to Höfner et al., U.S. Patent 6,053,502 to

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Hallenstvedt, U.S. Patent 6,293,553 to Werner et al., U.S. Patent 6,331,006 to Baily et al. and U.S. Patent 6,367,810 to Hatch.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Bannapradist whose telephone number is 703-305-4806. The examiner can normally be reached on Mon-Thurs and every other Friday from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

lb  
August 8, 2002

  
LYNNE H. BROWNE  
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TECHNOLOGY CENTER 3620